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ABSTRACT

This collection of abstracts is part of a continuing series providing information on recent doctoral dissertations. The 13 titles include studies of traditional and phonemic spelling of fifth and sixth grade students; the cloze procedure as a method of teaching spelling; the effect of the clinically supervised teacher upon language arts achievement; videotape versus audiotape information presentation for black fifth grade students; a model of vocabulary learning; academic predictors of spelling performance; bibliotherapy and kindergarten children; an academic game and spelling achievement; intelligence, reading, and spelling abilities; a structure-of-intellect symbolic memory spelling program for first grade students; spelling pattern training; manuscript proficiency as an indication of readiness for cursive handwriting; and the effect of career education on language arts achievement. (AA)

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Clanton, Patricia Brantley

THE EFFECTIVENESS OF THE LETTER-CLOZE PROCEDURE AS A METHOD OF TEACHING SPELLING

Huskey, JoAnn Chuoke

THE EFFECT OF THE CLINICALLY SUPERVISED TEACHER UPON THE LANGUAGE ARTS ACHIEVEMENT OF BOYS AND GIRLS IN THE THIRD AND SIXTH GRADES

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THE EFFECT OF CAREER EDUCATION ON LANGUAGE ARTS ACHIEVEMENT OF THIRD LEVEL STUDENTS

A COMPARISON OF TRADITIONAL SPELLING WITH PHONEMIC SPELLING OF FIFTH AND SIXTH GRADE STUDENTS

BAKER, Gertrude Ethel, Ed.D.
Wayne State University, 1977

Major Professor: Abraham Citron

Purposes

The primary purposes of this study were: 1. To compare the effectiveness of traditional and phonemic spelling of fifth and sixth grade students in three schools. 2. To determine if race and socio-economic status affect spelling achievement.

Population

The sample was made up of 119 students (boys and girls, black and white, lower and middle socio-economic backgrounds) from three schools.

Methodology

The data collected consisted of the spelling test results of eight tests (consisting of seven words) and a final test, (consisting of fifteen words), in traditional and phonemic spelling. There was time allowed for pre-study and word analysis of the eight daily tests but no time was allowed for word analysis or pre-study for the final test.

Findings

1. The students in each of the three schools made significantly fewer errors in phonemic spelling in the totals of the eight tests and in the final test. 2. The final test was the most significant. The mean number of errors by each school in traditional spelling was 14.0 out of a total of 15. In direct contrast, the mean number of errors in phonemic forms were 4.0, 5.8, and 5.1. When no time was given for memorization or analysis, the students did very poorly in spelling traditional forms and much better using phonemic forms. 3. Race or socio-economic status did not generally affect the results in traditional or phonemic spelling. Each group, regardless of race or socio-economic status, did far better in phonemic spelling than in traditional spelling. 4. The number of errors classified as toward a phonemic spelling exceeded the number classified as away from a phonemic spelling. The difference was significant. 5. There was a twenty-two percent increase in perfect (no errors) phonemic spelling tests over traditional spelling tests.

Implications for Education

If students could spell better, the probability of their writing more and better would greatly increase; and there is a good probability that their reading ability would increase. Research has confirmed the fact that many school dropouts have a history of failure in mastery of the basic skills. Because of an outmoded orthographic system that has not kept pace with the technology of a modern society, spelling reform seems to be one of the reforms called for by our educational predicament.

Recommendations

1. We need many tests of a practical, phonemic orthography performed by a variety of researchers to eliminate biases. This should be tested in spelling, writing and reading. 2. Advocates of spelling reform need to compromise and combine their efforts and support limited changes toward a simplified spelling. 3. Plan a process through which the above steps can be accomplished. Change will require a number of years but it must begin.

Order No. 77-23,943, 151 pages.

THE EFFECTIVENESS OF THE LETTER-CLOZE PROCEDURE AS A METHOD OF TEACHING SPELLING

CLANTON, Patricia Brantley, Ed.D.
University of Arkansas, 1977

Major Professor: Jack Williamson

THE PROBLEM

The problem of this study was to develop a method of spelling instruction using the letter-cloze procedure and to investigate the effectiveness of the letter-cloze procedure as an instructional technique for teaching spelling to sixth and seventh-grade students. Letter-cloze was defined in this study as the deletion of letters from words so that the student's task is to replace the missing letters. Four hypotheses were developed to investigate the problem: (1) The experimental group will have higher scores on the classroom weekly spelling tests than the control group. (2) The experimental group will have higher scores than the control group on the post-tests. (3) The scores of the group serving as the experimental treatment group will be higher after treatment than they were before treatment. (4) The sixth-grade experimental group will have higher scores than the seventh-grade experimental group due to the nature of teacher training (elementary versus secondary) and/or the organization of the classes (departmentalized versus self-contained classrooms).

DESIGN AND PROCEDURES

A counterbalanced design was used in the study. The sample was composed of 194 sixth and seventh-grade students in two school districts in Northwest Arkansas. Data were collected in the spring semester of 1976. The instruments were composed from the spelling lists normally utilized in the two school districts.

Pre- and post-tests were given. The experimental group received four letter-cloze exercises each week for three weeks. These exercises consisted of the spelling words the students would normally study. Each letter in the words was randomly deleted and the student's task was to correctly replace the missing letters. The control group received spelling instruction as usual.

ANALYSIS OF THE DATA

Pre-test scores, post-test scores, weekly test scores, and average of weekly test scores were analyzed in this study. As a result of the analysis of the data using t-test for independent study, it was found that: (1) Hypothesis One was rejected. However, the experimental group had higher mean scores on seven of the eight weekly test scores. (2) Hypothesis Two was rejected. The experimental group had higher scores on only one of the two post-tests. (3) Hypothesis Three was accepted. The scores of the experimental group were higher after treatment than before treatment. (4) Hypothesis Four was accepted. The sixth-grade experimental group had higher scores than the seventh-grade experimental group.

RECOMMENDATIONS

On the basis of the results of the study it was recommended that further research be undertaken to determine: (1) if the letter-cloze procedure is effective in conjunction with other techniques; (2) if the letter-cloze procedure is effective for teaching spelling to grades other than the sixth and seventh; (3) if the letter-cloze procedure is effective in teaching subjects other than spelling; and (4) if certain grades could benefit more than others from the use of the letter-cloze procedure.

Order No. 77-23,344, 132 pages.

THE EFFECT OF THE CLINICALLY SUPERVISED TEACHER UPON THE LANGUAGE ARTS ACHIEVEMENT OF BOYS AND GIRLS IN THE THIRD AND SIXTH GRADES

HUSKEY, JoAnn Chuoke, Ph.D.
University of South Carolina, 1977

Supervisor: Keith D. Berkeley

The purpose of this investigation was to explore the clinical supervision of teachers and its effect on the language arts achievement of boys and girls in the third and sixth grades. Specifically the investigation sought to show that third and sixth grade children supervised clinically would achieve more than similar children in traditionally supervised classes, that clinically supervised boys would surpass traditionally supervised boys, that clinically supervised girls would achieve more than traditionally supervised girls, and that there would be no difference between the gain of third grade children supervised clinically and the gain of sixth grade children supervised clinically. All of this was in the context of language arts and the language arts tests of standardized achievement batteries were used to determine gain from April 1976 to April 1977.

Six principals agreed to participate and also completed the study. The subjects of the study were ten third grade teachers and ten sixth grade teachers. Four boys and four girls from one third or sixth grade teacher's classroom were matched with four boys and four girls from another third or sixth grade teacher's classroom in the same school, using the language arts and mathematics scores from the 1976 administration of standardized tests. Once the pair of teachers in each grade and in each school was determined, the teacher in each pair who was to be supervised clinically was selected randomly by the toss of a coin. The other teacher in each pair was to be supervised traditionally as were all other teachers in the district, according to district policy.

The six principals received a day of training in clinical supervision, along with bulletins every three to four weeks, which further explained clinical methodology. The principals completed three observation cycles with both clinical and traditional teachers, spending approximately the same amount of time with each teacher. Teachers to be supervised clinically had conferences in advance of the observation in which they shared with the principal lesson plans and also their concerns about those plans and about the class in general. After observing and taking careful notes, principals met again with the clinical teacher to respond to the teacher's areas of concern.

After the April 1977 administration of the Comprehensive Test of Basic Skills an analysis of variance was performed on the gain scores in language arts from 1976 to 1977. No significant difference was found in achievement gains for any of the groups.

Interviews with teachers at the conclusion of the experiment showed that seven of the ten clinically supervised teachers preferred clinical supervision feeling that it was more effective for them.

The following recommendations were suggested as a result of this study: (1) Principals should be given more training in clinical supervision; (2) Further investigation should extend over at least two years to determine long range effects; (3) Teachers to be supervised clinically should receive training in preparation for this type supervision; (4) A larger sample of teachers and students should be used to present more data for analysis; (5) Principals should observe in all curriculum areas and use the composite scores on the standardized batteries, rather than being restricted to only language arts.

Data from the pre- and posttesting were analyzed by the Computer Center at the University of South Carolina, Columbia, South Carolina. Order No. 77-22,410, 113 pages.

A STUDY OF THE EFFECTS OF VIDEO-TAPE AND AUDIO-TAPE INFORMATION PRESENTATION ON LISTENING COMPREHENSION FOR BLACK FIFTH GRADE MALE AND FEMALE STUDENTS

IBBOTT, Roy Winston, Ph.D.
University of Maryland, 1977

Supervisor: Dr. E. Robert Stephens

The purpose of this study was to determine whether more or less comprehension occurred on the part of Black fifth grade students when information was transmitted through the use of (1) video-tape, and (2) audio-tape.

In order to investigate the purpose of this study, null hypotheses were constructed to test the research hypotheses that mode of information transmission, and sex of the listener had a differential effect on listening comprehension performance.

The experimental subjects used in this investigation were 120 Black fifth grade students in Baltimore City Public Schools, Maryland during the 1975-76 school year. Subjects were classified as "low socio-economic" students based on their participation in ESEA Title I and Free Lunch Programs.

Concomitant variables were sex, and initial differences in subjects' listening comprehension ability. The latter was treated as a covariable to adjust final mean scores after treatment, and was determined through the use of the STEP-Listening test, Form A, Grades 4-6.

The dependent variable of listening comprehension was measured through the use of a researcher-constructed test, and was manipulated by presenting three language arts selections to subjects through the use of video-tape and audio-tape. The levels of listening comprehension measured by the post-treatment test were (1) understanding literal meaning (knowledge), and (2) interpretation (comprehension).

Results of a pilot study conducted to test the effectiveness of the researcher-constructed test yielded reliability coefficients of .79 and .70 for the video-tape and audio-tape modes respectively. In order that the reliability reported for the total group is not spuriously high, the Hoyt's procedure was employed, and yielded a reliability coefficient of .72. A total of 43 students took part in the pilot study. Analysis of the regression of the researcher-constructed test on the covariate measured by the STEP-Listening test, indicated that the covariate was positively related to the criterion test at the .05 level of significance.

The null hypotheses were tested utilizing the analysis of covariance procedure (2 way ANCOVA). The null hypothesis regarding differences between treatment modes was rejected at the .05 level of significance. The null hypothesis, that the performance of females is less than or equal to males was accepted at the .05 level of significance. Additionally, a treatment x sex interaction was found to exist, the nature of which, that while the video-tape mode was favored by both males and females over the audio-tape mode, the magnitude of the effect was greater for females than males.

The results of the study were discussed as supporting the need for further studies to identify the value structures of different instructional media, as well as individual difference factors (psychological, physiological, and sociological) that interact with instructional design for specific types of media and materials. Order No. 77-26,562, 123 pages.

A TEST OF A MODEL OF VOCABULARY LEARNING

JACOBS, Martina Magenau, Ph.D.
University of Pittsburgh, 1977

The present study was designed to examine basic and applied aspects of vocabulary learning. The effectiveness of a vocabulary lesson format, called Vocabulary Problems (VPs) was examined. An attempt was made to isolate those features of the VPs which most influence vocabulary learning. A performance model was also proposed and the adequacy with which it portrayed the processes used by students in completing the VPs was examined.

Seven different types of VPs, called "item types," were used to teach 16 new words to fourth grade students. The item types provided information about new words and each item type contained a comprehension question. The item types varied in: (a) the amount of information provided about the new word and a second word that was used in the comprehension question and (b) the type of comparison required by the comprehension question (comparison with another word--W, a definition--D, or a specific instance of a word's use--I).

Three research hypotheses were examined. The first hypothesis was that the VPs would result in more vocabulary learning than no training. An experimental group was taught the vocabulary words through the seven VP item types over a four-day period. A control group did not receive the VPs. When the two groups' knowledge of the words was compared through a Vocabulary Word (VW) pre- and posttest, the experimental group was found to have produced significantly more correct definitions than the control group.

The second hypothesis was that item types varied in difficulty. Predictions were derived from the differences which could be explained by a performance model. According to the model, the item types required different numbers and types of processes to solve them. By counting the number of steps required to reach a correct solution, specific hypotheses were stated regarding the difficulty of each item type, with those requiring more steps considered more difficult.

Hypotheses about differential difficulty were tested by comparing students' performance on each of the seven item types. Significant differences were found between the item types, but these differences did not provide support for the research hypotheses. The results suggested that the dimension, type of comparison, determined item type difficulty, rather than the dimension, number of steps, which was used to make initial predictions. Specifically, I item types were easier than W and D item types. The results were not contradictory to the performance model. As noted above, the dimension, type of comparison, is one of the dimensions upon which the item types vary. This dimension also plays a major role in the performance model.

The third research hypothesis was that the item types differed in the extent to which they influenced vocabulary learning. To test this, students' scores on each of the item types were correlated with their scores on the VW posttest. This analysis showed I item types and D item types to be more highly correlated with vocabulary learning than W item types. Thus, item difficulty was not found to be in perfect correspondence with item type effectiveness.

The results of this study provide a number of suggestions regarding vocabulary learning and vocabulary instruction. Although little information was gained regarding the specifics of vocabulary learning, the results did point to the dimension, type of comparison, as an important determiner of difficulty. The results also suggested that I and D item types, presented in that order, might produce the most effective sequence of vocabulary instruction. The effectiveness of this combination of item types and the comparative effectiveness of this method of vocabulary instruction should be verified in future research.

Order No. 77-21,244, 164 pages.

CONCURRENT ACADEMIC PREDICTORS OF SPELLING PERFORMANCE OF THIRD GRADE CHILDREN

LESSEN, Elliott I., Ph.D.
The University of Florida, 1977

Chairperson: William D. Wolking

The focus of the present study was to identify a set of prerequisite tasks, modality relevant to spelling performance, that when based on accuracy and speed as performance measures, would discriminate between good spellers and poor spellers. A review of related literature suggested that (a) tasks used to date have represented more than one basic behavior per task; (b) tasks that have been used are related to, but are not direct replications of the modality input and output structure of spelling behavior; (c) tasks used have not represented the most basic skills assumed by curriculum hierarchies to be prerequisite to spelling competence; and (d) tasks have been assessed by accuracy alone, without referring to speed (fluency) as a viable performance measure.

A spelling test was administered to a group of third graders in Alachua County, Florida. From these results, the top and bottom 25.9 percent (good and poor spellers) were chosen (N=35 per group). Each of these subjects was then assessed on each of eight tasks on three consecutive days. Accuracy and speed scores were obtained for each subject on each task. Discriminant analysis and multiple regression procedures were used to analyze the data.

The results of the study indicated that two of the eight tasks used, See CVC trigram/Say nonsense word and Hear two letter blends and digraphs/Write letters, were the best tasks with which to discriminate groups of good and poor third grade spellers. Speed scores on the two tasks were found to be the most reliable discriminators between the two groups of spellers. The findings of this study indicated that the use of speed as a performance measure may serve two useful functions. First, speed scores are the best discriminators between good and poor spellers. Second, speed scores reduce possible misclassifications that may interfere with a child's curricular program. The overall and additional findings have suggested possible alternative research efforts that may help solve the problem of presenting classroom instruction that could promote spelling achievement. Order No. 77-25,940, 105 pages.

THE EFFECT OF BIBLIOTHERAPY IN REDUCING THE FEARS OF KINDERGARTEN CHILDREN

LINK, Mary Anna Shaw, Ed.D.
Ball State University, 1976

Adviser: Dr. Edward M. Wolpert

The purpose of the study was to determine the effectiveness of bibliotherapy in reducing the fears of kindergarten children.

The experimental design of the study compared three groups using pretest/posttest measures: 1) The Experimental group was an intact class of kindergarten students. The treatment for the group involved reading books on fear related subjects to the students and then having follow-up discussions concerning the book and the children's feelings. The treatment was conducted on a biweekly basis for eight weeks. 2) Control group I was an intact class of kindergarten students. The treatment for the group involved reading books of non-fear related subjects to the students and then having follow-up discussions concerning the book and the children's feelings. The treatment was conducted on a biweekly basis for eight weeks. 3) Control group II represented students from two intact classes of kindergarten students who had the same teacher and had received parental permission to participate in the study. There was no treatment for Control group II. The Experimental group and Control group I were randomly assigned treatment.

The Link Children's Fear Scale was administered as a pretest and posttest. The instrument was developed from fifty items which purport to measure children's fears. Factor analysis was employed utilizing principal axes components to estimate the number of factors needed to best explain the total variation in the items. Using squared multiple correlations as initial communality estimates, the principal axes analysis suggested a two factor solution. An Oblimin rotation was used. Those items which loaded above .30 were selected and retained in the revised instrument. The instrument in its final form consisted of twenty-four items. An example of an item: "Do you like to sleep with a light on?" The response mode was the child's indication yes or no.

The factor analysis described above attests to the construct validity of the instrument. Face validity and sampling validity had previously been determined. The test-retest reliability of the instrument was calculated from kindergarten students who did not receive treatment. A reliability coefficient of .70 was obtained.

The design for the study attempted to control for all variables other than treatment received. The Experimental group and Control group I were supervised by the same kindergarten teacher. A Reader/Discussion Leader, certificated as an elementary teacher, read the selected books and led the follow-up discussions for the Experimental group and Control group I. The Experimental group and Control group I followed the same procedure of hearing a book read by the Reader/Discussion Leader and then participated in a follow-up discussion of the book, as a part of each treatment session.

The hypothesis was stated in the study as follows: There is no difference between the mean adjusted posttest scores of kindergarten students who received bibliotherapy to reduce childhood fears and the mean adjusted posttest scores of kindergarten students who did not receive bibliotherapy, where the means have been adjusted on the basis of the pretest scores.

To test the hypothesis an analysis of covariance was used. The pretest served as the covariate and the posttest was the criterion.

The analysis showed that the pretests for all groups differed significantly (.001) from the posttests. However, the group effects were not significant at the .05 level, thus indicating no difference between the experimental and control groups. The hypothesis was not rejected. Order No. 77-7614, 96 pages.

THE EFFECTS OF AN ACADEMIC GAME ON THE SPELLING ACHIEVEMENT OF THIRD GRADERS

PINTER, Donna Dae Krewedl, Ph.D.
University of California, Berkeley, 1976

Since the 1960's, more educators and researchers have turned to educational games in the classroom as a possible vehicle in motivating children to learn more cognitive material and, possibly, to have a positive influence on the more evasive area of the affect. However, many of the original claims made about the attributes of such a gaming approach remain unsubstantiated. This investigation compares the use of an academic gaming approach with an expository workbook approach on the spelling achievement of 94 third grade children from four classes in rural Pennsylvania. This study was also designed to indicate if the variables of sex and/or IQ have a significant influence on the learning of students in either of these two approaches. As an adjunct, the affective domain of self-concept was also measured utilizing pre- and post-experimental procedures to discern if any changes took place possibly due to treatment. Pre- and post-experiment spelling tests were administered to the four groups participating in this study to determine if group mean differences existed possibly resulting from the respective treatments. Three weeks after the termination of the experiment, a third test was given to the children to determine if there existed any group mean differences in regards to the retention of the spelling words. Five analyses of covariance were computed using the Academic Games (AG) and Expository Workbook (EW) Groups, IQ and sex as the three independent variables. In addition to the two standardized self-concept tests utilized in this investigation, an investigator-designed school-concept measure was also administered and an operational definition of school-concept formulated.

Findings of this research indicated, at least for the population utilized in this study, that achievement scores, as measured by post-spelling test scores which were adjusted for differences with pre-spelling test scores, were significantly higher ($p=<.05$) for the academic gaming treatment group. These scores were significantly higher for both males and females in the gaming group. In addition, the findings of this present investigation indicate that achievement scores, as measured by retention-spelling test scores, were higher for academic gaming lower and average IQ boys in comparison to lower and averages IQ males in the workbook treatment groups. Though these differences were not significant at the .05 level, the trend of these findings towards significance merits further investigation into the possible effects of a gaming experience on the achievement scores of lower and average IQ boys in comparison to more traditional approaches. In general, self-concept was higher for participating third grade girls than for third grade boys. These findings of higher self-concept for elementary school females are consistent with past research on self-concept with elementary school boys and girls. Self-concept, however, was not affected by either treatment but remained stable. Order No. 77-15,821, 130 pages.

INTELLIGENCE, READING, AND SPELLING ABILITIES

SMITH, Howard Walcott, Ph.D.
Columbia University, 1977

Purpose

Spelling researchers have identified various abilities as being related to spelling performance. Empirical support for these relationships is erratic, in that correlations between a given variable and spelling performance have sometimes ranged from .20 to .70 (Horn, 1969). Frequent problems with previous research include lack of adequate controls in measurement and insufficient statistical analysis. The purpose of this study was to measure spelling-related skills identified in the literature and to assess the predictive strengths of their relationships to spelling performance, as compared to the predictive strengths of common reading and intelligence measures.

Method

A battery of five standardized and five experimental tests, representing spelling and spelling-related abilities, was administered to 149 sixth grade children. The standardized tests included a criterion measure of spelling production, along with measures of recognition of incorrect spellings, reading vocabulary, reading comprehension, and intelligence. Each of the experimental tests employed pseudowords. One of these experimental tests measured knowledge of spelling rules and one measured knowledge of sound-to-letter correspondence. The other three experimental tests provided measures of visual memory for pseudowords. The intention was to make them as methodologically different as possible in order to eliminate the problem of task specificity which has been common to past research.

Results

1. Correlations between spelling performance, as measured by accuracy of production, and the selected variables are indicated below:

	Raw Correlations	Corrected for Attenuation
a. Spelling Recognition	.88	.94
b. Reading Comprehension	.69	.72
c. Spelling Rules	.68	.92
d. Intelligence	.67	.74
e. Visual Memory (Sum Score)	.67	.72
f. Sound-to-Letter Correspondence	.61	.83
g. Reading Vocabulary	.61	.64

2. Centroid factor analysis of all the variables resulted in the extraction of a single common factor. The highest factor loadings represented spelling performance (.86), intelligence (.82), and reading comprehension (.81).

3. The multiple correlation of I.Q. and reading with spelling performance was .73. Addition of the spelling rule, phonetic, and visual memory variables raised the multiple correlation to .84, accounting for a third again as much of the spelling variance.

4. Females scored significantly higher on the criterion measure of spelling performance than did males ($p < .01$). Visual Memory performance among males was much more strongly related to their spelling performance ($r = .80$) than it was among females (.48).

Conclusions

1. The spelling rules, sound-to-letter correspondence, and visual memory subtests clearly measured spelling-related skills. 2. The common factor extracted in the centroid factor analysis was probably a combination of general intelligence and reading ability. It could not represent spelling ability, since the loadings for intelligence and reading comprehension were just as high as the loading for spelling performance, and the intelligence and reading measures did not require spelling. 3. Of the three spelling subskills (spelling rules, sound-to-letter correspondence, and visual memory), visual memory appeared to play the most influential role in distinguishing the spelling performance of subjects with specific spelling deficits, and the performance of males vs females. 4. A classroom teacher could account for about 50% of the individual differences in spelling performance among his or her students based on I.Q. and reading ability. However, if the three spelling subskill measures are employed in addition, that same teacher could account for about two-thirds of the spelling variance.

Order No. 77-24,347, 133 pages.

AN INVESTIGATION OF THE EFFECT OF AN EXPERIMENTAL STRUCTURE-OF-INTELLECT SYMBOLIC MEMORY PROGRAM ON THE SPELLING PERFORMANCE OF FIRST GRADE STUDENTS

TANNIR, Donna Candida Vallino, Ed.D.
State University of New York at Albany, 1976

This study investigated the effect of an experimental symbolic memory program on advancing the spelling performance of first grade students. The psychological and theoretical background for this study was Joy Paul Guilford's "Structure-of-Intellect" (SI) and the interpretation and instructional uses of the Structure of Intellect (SOI) by Mark Meeker. The statistical design used to investigate this problem was the Solomon Four-Group Design which has pretest and posttest measures and makes explicit consideration of the external validity factors of testing and the interaction of testing and treatment. The statistical treatments used were t-tests, analysis of variance and analysis of covariance. The criterion measures were the Spelling Test, Lower Primary, Form W of the California Achievement Test (1957 with 1963 norms) and the Structure of Intellect Institute's SOI Learning Abilities Test (LAT) (1975). Students were assigned randomly to pretesting and treatments. Posttests were administered to all students. The final statistical design was researched with 8 first grade classes totaling 170 students.

The study occurred during the fourth, fifth and sixth months of first grade (December 1975 to February 1976) and involved 18 instructional lessons on symbolic memory for the experimental students and 18 instructional lessons focusing on other SOI intellectual activities excluding symbolic memory for control students. All lessons were developed by the SOI Institute in California. The time of instruction was equal for both groups. All lessons were given in the students' own classroom by two experimenters who alternated in their instruction between the two groups.

Statistical results showed that after treatment, the experimental students scored significantly higher than the control students on the symbolic memory subsection of the SOI Learning Abilities Test. The experimental students did not score significantly higher than control students in spelling. Symbolic memory scores and spelling scores were significantly correlated at the .01 level of confidence.

The findings of this study indicate that symbolic memory skills can be improved by instruction in first grade students. In conclusion, several areas for further related study in spelling and symbolic memory were suggested.

Order No. 77-8635, 201 pages.

THE EFFECTS OF SPELLING PATTERN TRAINING ON THE SPELLING BEHAVIOR OF PRIMARY ELEMENTARY STUDENTS: AN EVALUATIVE STUDY

THOMPSON, Murray Daniel, Jr., Ph.D.
University of Pittsburgh, 1977

This study was designed to investigate the effects sound-spelling pattern training has on basic spelling processes, achievement, and the knowledge organization of sound-letter correspondence information in memory. It further served as an evaluative study of the computer-assisted instructional program used to teach sound-spelling patterns to students. The CAI program used was developed by Block & Simon (1973), and was designed to teach sound-spelling correspondences for sounds having more than one graphemic representation where those representations occur at a fairly high rate throughout the corpus of English spellings. The CAI program was interfaced with standard off-line workbook pages designed to emphasize sound-letter correspondences. The design of the instructional treatment was based on a psychological model of spelling developed by Simon and Simon (1973) and elaborated by Block (1974). The basic theory was used as a means for establishing hypotheses about expected outcome behaviors induced by the sound-letter correspondence training.

Three hypotheses were tested. The first was that sound-letter correspondence training would facilitate basic process development. The second was that experience on the program would induce higher levels of knowledge organization for sound-letter correspondences in memory. The final hypothesis predicted that increased basic process skill functioning, and increased knowledge of sound-letter correspondences, would be reflected by increased spelling and reading achievement. Tests to measure basic process skills and permit monitoring of the changes in the nature of the memory representation for sound-letter correspondence information were selected and/or developed. Standardized achievement tests were used to measure spelling and reading achievement.

Ten second grade students, who had access to CRT computer terminals necessary for sound-letter correspondence training, were identified as the experimental group. Ten second grade students selected at random made up the comparison group. Both groups were administered a battery of basic process and achievement tests prior to the instructional treatment. Experimental subjects were given extensive and systematic instruction in sound-letter correspondence training. Comparison group subjects were involved in a traditional word-list oriented spelling curriculum. Both groups received the same amount of instruction; roughly, three periods of between 25–35 minutes per week. As experimental subjects progressed through different lessons of the computer assisted sound-spelling pattern program, concept tests were administered on a pre, post and retention basis for each target lesson to assess levels of sound-letter correspondence information. These tests included questions designed to tap different conceptual levels of correspondence information, and in addition, required students to spell words taken at random from the CAI lessons and that contained the target spelling pattern. The study thus derived continued throughout the 1975–76 school year.

Students from both groups were matched according to performance on the pre-test battery for the administration of the post-test. As experimental students completed the sound-letter correspondence treatment, they were matched with their counterpart from the comparison group and administered a post-test battery identical to that used as a pre-test.

Results from the study supported the hypotheses. Sound-letter correspondence training subjects significantly out-performed word list training subjects in number of correct responses on all four basic process tests administered. In addition, experimental subjects significantly out-performed word list training subjects in the number of correct responses produced on all three achievement tests administered. Concept test analysis revealed sound-letter correspondence training resulted in significant improvement in the amount and level of sound-letter correspondence knowledge in memory, and increased ability of subjects to spell words that used that information.

Selected hypotheses of the Simon & Simon (1973) and Block (1974) theory were supported. These data suggest correspondence training of the type used in the study facilitated the development of basic process skills used in spelling, the ability to spell whole words, and the knowledge structure of sound-letter correspondence information in memory, when compared to a traditional word list oriented instructional approach. These data suggest that sound-letter correspondence training may be the place to put instructional emphasis in beginning spelling programs, and further, that such strategies may serve as a supplemental instructional procedure for reading programs.

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MANUSCRIPT PROFICIENCY AS AN INDICATION OF READINESS FOR CURSIVE HANDWRITING AND LEARNER VERIFICATION OF EVALUATIVE OVERLAYS FOR TRANSITION CURSIVE LETTER STROKES

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The Ohio State University, 1977

A multiple baseline design was employed to answer questions in three general areas: readiness to begin cursive handwriting based on manuscript handwriting, effects of procedures using evaluative overlays on students' handwriting and generalization of legibility from letters receiving feedback to letters which were practiced but received no feedback and letters which were not practiced at all.

To determine if manuscript proficiency levels might indicate a readiness to begin cursive instruction, students were selected randomly from a fixed subset. Selection criteria were: (1) expressed interest and cooperation by teacher and principal; (2) manuscript proficiency based on evaluation procedures described by Helwig et al., (1975) and (3) nonintroduction to cursive handwriting. Twelve first grade students meeting these criteria were selected. During each session students were asked to copy the lower case cursive letters. Initially, the experimenter modeled the formation of each letter, removed hers from sight and asked the student to copy the letter from a sheet containing model letters. Data collected were trials to criterion. Criterion was defined as three consecutive sessions with 50 percent correct trained letter strokes. Upon achieving this, the modeling procedure by the evaluator was eliminated for the remainder of the sessions. Students were then simply asked to copy the model letters from the sheet. Data were subjected to a one-way analysis of variance to determine if there were any differences in the number of trials for different skill groups. Results failed to reject the null (d.f., 5,1, F=.19).

Three interventions using the evaluative overlays were examined: verbal and visual feedback, verbal and visual feedback plus contingent rewriting of trained letters with one or more incorrect strokes one time and potential reinforcement contingent on increasing the percentage of correct strokes. During all three interventions the percentage of correct trained letter strokes increased.

Students copied both the trained (a,f,h,i,o,q,t,w,x,z) and the untrained-practiced letters (b,c,d,e,g,j,k,l,m,n,p,r,s,u,v,y) during each session but received feedback only on the trained letter strokes. Performance on both the untrained-practiced and trained letter strokes followed the same pattern of increasing and decreasing with performance on the untrained-practiced letters consistently lower throughout the study.

At five points in the study (before baseline, each intervention condition and at the conclusion of the study), students were asked to copy the upper case letters from the model letter sheet with evaluators not modeling the formation of the letters. Performance on the second probe was lower than on the first but once intervention procedures were implemented the percentage of correct probe (upper case) letter strokes increased though at a lower percent than either the trained or untrained-practiced letter strokes.

Controls employed in this study included inter-observer agreement on total strokes, strokes marked correct, and strokes marked incorrect; rotating of subjects and experimenters and a control procedure for differential verbal statements. The control for differential verbal statements included taping one session per experimenter during each intervention condition. The tapes were coded by two observers for statements on correctness and incorrectness. Data were subjected to a one-way analysis of varianced procedure to test for differences. No differences were found between experimenters (d.f., 2,8; F=.0303). Inter-observer agreement for total strokes ranged from 84 to 100 percent with a mean of 94 percent; for correct strokes ranged from 20 to 100 percent with a mean of 82 percent; for incorrect strokes ranged from 84 to 100 percent with a mean of 98 percent.

The study demonstrated that the overlays were sensitive enough to detect change in cursive letter formation, that the interventions using the overlays were effective in increasing the percentage of correct strokes and that some generalization of legibility from the trained letters to the untrained-practiced letters and the upper case letters did occur. No statement can be made about which proficiency level of manuscript writing might best indicate a readiness to begin cursive handwriting.

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THE EFFECT OF CAREER EDUCATION ON LANGUAGE ARTS ACHIEVEMENT OF THIRD LEVEL STUDENTS

VANDER MOLEN, Marjorie Ruthanne, Ph.D.
Michigan State University, 1977

The purpose of this study was to explore the effect of infusing career education into the basic curriculum and to determine the effect of career education as a motivator on language arts achievement and also to determine the effect upon the student's knowledge of occupational awareness. This study also sought to determine the correlation between the scores of the respondents in the experimental group on the Metropolitan Achievement Test and the Career Awareness Inventory.

The program developed for this study consisted of the following facets: (1) identifying Michigan Career Development Sub Goals that could be infused into pre-determined units of study, (2) infusing these sub goals with specified units of study, (3) the formation of a "Career Corner" where the students could pursue self-initiated and directed exploratory activities to gain knowledge of the world of work, and (4) procuring published materials such as multi-media kits, films, film strips, records, posters, and published and unpublished activities for the experimental group.

The pre- and post-test measures were taken on the Metropolitan Achievement Test, Language Arts Subtest Forms G and F and post-test measures were taken on the Career Awareness Inventory. In addition direct observations were made of the teaching of the language arts skills.

The findings included the following: (1) Both groups scored above the norms on the pre-test of the Metropolitan Achievement Test, Language Arts Subtest, Form G. (2) In comparing the mean gain score of the Metropolitan Achievement Test, Language Arts Subtest, expressed as grade equivalent, for the experimental group to the mean gain score, expressed as grade equivalent, for the control group, the findings indicated that the experimental group made greater gains, which were statistically significant at the .10 level, according to a 1-tailed test. (3) In comparing the mean gain score of the Metropolitan Achievement Test, Language Arts Subtest, expressed as a raw score, for the experimental group to the mean gain score, expressed as a raw score, for the control group, the findings indicated that the experimental group made greater gains, which were statistically significant at the .10 level, according to a 1-tailed test. (4) In comparing the mean score of the Career Awareness Inventory, expressed as a raw score, for the experimental group to the mean score, expressed as a raw score, for the control group, the findings indicated that the experimental group made greater gains which were statistically significant at the .01 level, according to a 1-tailed test. (5) A correlation on the measures of the post-test of the Metropolitan Achievement Test, Language Arts Subtest, Form F and the Career Awareness Inventory for the students in the experimental group indicated a significant positive relationship at the .01 level, according to a 1-tailed test.

As a result of the findings in this study, the following conclusions appear to be warranted: (1) The language arts skills of the students in the experimental group showed a greater improvement than the students in the control group. (2) Students in the experimental group displayed a greater knowledge of occupational information than students in the control group. (3) The Michigan career development sub goals were infused into the language arts curriculum in an effective method for the students in the experimental group in this study. (4) Career education seemed to be a form of educational motivation that enabled the teacher to encourage language arts achievement by helping students see some relationships between that which they are presently studying and the possible careers they may choose to follow at some future time.

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